

**BEFORE**

**THE PUBLIC SERVICE COMMISSION OF**

**SOUTH CAROLINA**

**DOCKET NO. 2019-3-E - ORDER NO. 2019-\_\_**

**SEPTEMBER \_\_, 2019**

IN RE: Annual Review of Base Rates for Fuel Costs of Duke Energy Carolinas, LLC	) <b>JOINT PROPOSED ORDER</b> ) <b>APPROVING AND ADOPTING</b> ) <b>ADJUSTMENT IN FUEL COST</b> ) <b>RECOVERY FACTORS AND</b> ) <b>ADOPTING STIPULATION</b> )
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**I. INTRODUCTION**

This matter comes before the Public Service Commission of South Carolina (“Commission”) on the annual review of base rates for fuel costs of Duke Energy Carolinas, LLC (“DEC” or “Company”). The procedure followed by the Commission is set forth in S.C. Code Ann. § 58-27-865 (2015), which provides for annual hearings to allow the Commission and all interested parties to review the prudence of the fuel purchasing practices and policies of an electrical utility and for the Commission to determine if any adjustment in a utility’s fuel cost recovery mechanism is necessary and reasonable. Additionally, and pursuant to S.C. Code Ann. § 58-39-140 (2015), the Commission must determine in this proceeding whether an increase or decrease should be granted in the fuel cost component designed to recover the incremental or avoided costs incurred by the Company to implement the Distributed Energy Resource Program (“DERP”) previously approved by the Commission.

### **A. Notice and Intervention**

By letter dated March 18, 2019, the Clerk's Office of the Commission instructed the Company to publish a Notice of Hearing and Pre-file Testimony Deadlines ("Notice") in newspapers of general circulation on or before May 24, 2019 and provide Proof of Publication on or before June 14, 2019. The letter also instructed the Company to furnish the Notice to each affected customer on or before May 24, 2019 and provide a certification to the Commission on or before June 14, 2019, that notification has been furnished. The Notice indicated the nature of the proceeding and advised all interested parties desiring participation in the scheduled proceeding of the manner and time in which to file appropriate pleadings. On May 28, 2019, the Company filed with the Commission affidavits demonstrating that the Notice was duly published and filed with the Commission a letter certifying that a copy of the Notice was furnished to the Company's retail customers in South Carolina in accordance with the instructions set forth in the Clerk's Office letters starting April 8, 2019 and completed on May 7, 2019.

Petitions to Intervene were received from the South Carolina Energy Users Committee ("SCEUC"), the South Carolina Coastal Conservation League ("CCL"), the Southern Alliance for Clean Energy ("SACE"), and the South Carolina Solar Business Alliance, LLC ("SBA"). The South Carolina Office of Regulatory Staff ("ORS") is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B) (Supp. 2018).

There was no opposition to any of the Petitions to Intervene and the Commission issued Orders granting each Petition to Intervene.<sup>1</sup>

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<sup>1</sup> See Order No. 2019-431, granting the Petition to Intervene filed on behalf of SCEUC; Order No. 2019-458, granting the Petition to Intervene filed on behalf of SACE and CCL; Order No. 2019-459, granting the Petition to Intervene filed on behalf of SBA.

## **B. The Stipulation**

On September 3, 2019, after the pre-filing of direct testimony by the parties, and after all parties had conducted discovery in this matter, ORS filed with the Commission a Stipulation (“Stipulation”) executed by DEC, ORS, and SCEUC (collectively, referred to as the “Stipulating Parties” or sometimes individually as a “Stipulating Party”). In the Stipulation, the Stipulating Parties represented to the Commission that they had discussed the issues presented in this case and determined that each Stipulating Party’s interests and the public interest would be best served by resolving all of the Stipulating Parties’ issues pending in this case in accordance with the terms and conditions contained in the Stipulation. The Stipulation is attached hereto as Order Exhibit 1 and is incorporated in and made part of this Order. The terms of the Stipulation are summarized as follows:

- a) The Stipulating Parties agree that, without prejudice to the position of any Party in future proceedings, the Stipulating Parties accept all recommendations and adjustments in the testimony and exhibits of ORS witnesses.<sup>2</sup>
- b) The testimony supported the terms of the Stipulation regarding the appropriate fuel factors for DEC to charge for the period beginning with service rendered in October 2019 and extending through service rendered in September 2020, which are listed in the following table below:

Customer Class	Base Fuel Cost Component (¢/kWh)	Environmental Cost Component (¢/kWh)	Capacity Related Cost Component (¢/kWh)	DERP Avoided Cost Component (¢/kWh)	Total Fuel Factor (¢/kWh)
Residential	2.1166	0.0603	0.1101	0.0026	2.2896

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<sup>2</sup> At the hearing, ORS witnesses affirmed their testimony, except to the extent such testimony could be construed as conflicting with the Stipulation.

General Service/Lighting	2.1166	0.0249	0.0279	0.0012	2.1706
Industrial	2.1166	0.0158	0.0131	0.0007	2.1462

- c) The Stipulating Parties agree for purposes of Stipulation and without prejudice to the position of any Party in any future proceeding that the 2019 component values for the Net Energy Metering (“NEM”) Distributed Energy Resource, as shown in Table 5 in the testimony of DEC witness Martin and listed below comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10, *et seq.*

Components of NEM Distributed Energy Resource Value	Component value (\$/kWh) Residential PV <sup>3</sup>	Component value (\$/kWh) SGS PV <sup>2</sup>	Component value (\$/kWh) Large PV <sup>2</sup>
Avoided Energy Cost	\$0.036692	\$0.036689	\$0.036675
Avoided Capacity Cost	\$0.014078	\$0.014071	\$0.013978
Ancillary Services	\$0.000000	\$0.000000	\$0.000000
T&D Capacity	\$0.000000	\$0.000000	\$0.000000
Avoided Criteria Pollutants <sup>4</sup>	\$0.000034	\$0.000034	\$0.000033
Avoided CO2 Emissions Cost	\$0.000000	\$0.000000	\$0.000000
Fuel Hedge <sup>5</sup>	\$0.000000	\$0.000000	\$0.000000

<sup>3</sup> “Residential PV” refers to a load shape reflecting generation installed by a residential customer. “SGS PV” refers to a load shape reflecting generation installed by a small commercial/industrial customer served under Small General Service Schedule SGS. “Large PV” refers to a load shape reflecting generation installed by a customer with higher consumption requirements and applies to all other nonresidential schedules. For the first time, the Company has separated the values for residential customers (“Residential PV”) and small commercial/industrial customers (“SGS PV”) as a result of available actual metered solar load profile data for the residential class. The Company continues to utilize third-party solar load profile data for non-residential customers.

<sup>4</sup> Avoided Criteria Pollutants reflects NOx and SOx that have been separately identified from approved marginal energy costs.

<sup>5</sup> Pursuant to the Settlement Agreement reached in DEC’s 2016 annual fuel proceeding (Docket No. 2016-3-E), the Company has calculated the hedge value and determined that no fuel hedge exists; because no fuel hedge exists, as calculated, there is no value to assign in the table.

Utility Integration & Interconnection Cost	\$0.000000	\$0.000000	\$0.000000
Utility Administration Cost	\$0.000000	\$0.000000	\$0.000000
Environmental Costs	\$0.000000	\$0.000000	\$0.000000
<b>Subtotal</b>	<b>\$0.050804</b>	<b>\$0.050794</b>	<b>\$0.050686</b>
Line Losses <sup>6</sup>	\$0.002315	\$0.002315	\$0.002309
<b>Total Value of NEM Distributed Energy</b>	<b>\$0.05312</b>	<b>\$0.05311</b>	<b>\$0.05299</b>

- d) The Stipulating Parties agree that the appropriate fixed charges per account, including Gross Receipts Tax and regulatory fees, to recover DERP incremental costs (“DERP Charge”) for the period beginning with service rendered from October 2019 through September 2020 are listed below.

DERP Charge (\$/account)		
	Annual Charge	Monthly Charge
Residential	7.45	0.62
Commercial	23.55	1.96
Industrial	1,138.54	94.88

- e) The Stipulating Parties further agree that, except as noted below, any challenges to DEC’s historical fuel costs recovery for the period ending May 31, 2019, are not subject to further review; however, the projected fuel costs for periods beginning June 1, 2019, and thereafter, shall be open issues in future fuel cost proceedings held under the procedure and criteria established in S.C. Code Ann. § 58-27-865.
- f) With regard to plant outages not complete as of May 31, 2019, and plant outages where final reports (Company, contractor, government reports or otherwise) are not available, the Stipulating Parties agree that the Stipulating Parties retain the right to review the reasonableness of plant outage(s) and associated costs in the review

<sup>6</sup> Line loss factors are 3.99645% for on-peak marginal energy, 3.98952% for off-peak marginal energy and 6.0427% for marginal capacity per DEC’s updated 2018 line loss analysis based upon 2018 cost of service.

period during which the outage is completed or when the report(s) become available.

- g) DEC agrees that in an effort to keep the Stipulating Parties and DEC's customers informed of the (over)/under recovery balances related to fuel costs, DEC's DERP incremental costs, and of DEC's commercially reasonable efforts to forecast the expected fuel factor to be set at its next annual fuel proceeding, DEC will provide to the Stipulating Parties, and where applicable, its other customers, the following information:

1. Copies of the monthly fuel recovery reports currently filed with the Commission and ORS showing the monthly (over)/under-recovery and cumulative balances through the end of the forecast period<sup>7</sup>;
2. Copies of the monthly fuel recovery reports currently filed with the Commission, modified to include reports of itemized monthly actual DERP incremental and avoided costs as well as the monthly (over)/under cumulative balances of DERP avoided and incremental costs;
3. Forecasts of the expected fuel factor to be set at its next annual fuel proceeding based upon DEC's historical (over)/under recovery to date and DEC's forecast of prices for uranium, natural gas, coal, oil and other fuel required for generation of electricity. Such forecasts will be provided in the 4th quarter of the calendar year prior to the next annual fuel proceeding and in the second quarter of the calendar year of the Company's next annual fuel

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<sup>7</sup> The Company agrees to break-out Schedule 4 of the monthly fuel recovery reports so that each component (base fuel, environmental, avoided capacity, and DER avoided costs) is reported separately.

proceeding. DEC will use commercially reasonable efforts in making these forecasts. To the extent that the forecast data required hereunder is confidential, any party or customer, other than ORS, that requests forecasted fuel data will have to sign a non-disclosure agreement to protect the data from public disclosure and to only disclose it to employees or agents with a need to be aware of this information; and

4. Forecasts of the expected DERP Charge to be set at its next annual fuel proceeding based upon DEC's historical (over)/under recovery to date and DEC's forecast of DERP incremental and avoided costs. Forecasts will be provided in the same manner as paragraph 3 above.
- h) The Stipulating Parties agree that DEC's methodology for determining the environmental cost component of the fuel factor and the methodology for allocation and recovery of the capacity-related cost component of the fuel factor (which includes purchased power capacity costs under the Public Utility Regulatory Policies Act of 1978 and natural gas transportation and storage costs) are consistent with the statutory requirements of S.C. Code Ann. § 58-27-865.
- i) DEC agrees to continue to examine and make adjustments as necessary to its natural gas hedging program in light of the potentially reduced volatility in the domestic natural gas market. DEC also agrees to provide monthly natural gas hedging reports to the ORS.

## **II. JURISDICTION OF THE COMMISSION**

In accordance with S.C. Code Ann. § 58-27-140(1) (2015), the Commission may, upon petition, "ascertain and fix just and reasonable standards, classifications, regulations, practices or

service to be furnished, imposed, observed, and followed by any or all electrical utilities.” Further, S.C. Code Ann. § 58-27-865(B) (2015) states, in pertinent part, that “[u]pon conducting public hearings in accordance with law, the commission shall direct each company to place in effect in its base rate an amount designed to recover, during the succeeding twelve months, the fuel costs determined by the commission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period.”

Consistent with the requirements of S.C. Code Ann. § 58-27-865(B), the Commission convened an evidentiary hearing to determine the reasonableness of the Company’s proposed rates to recover fuel costs. The Commission also considered the reasonableness of the Stipulation, and whether acceptance of the Stipulation is just, fair and in the public interest.

### **III. DISCUSSION OF THE HEARING**

The public evidentiary hearing in this matter was held on September 10, 2019, before this Commission with the Honorable Comer H. “Randy” Randall presiding as Chairman. Representing the Parties and appearing before the Commission in this Docket were Rebecca J. Dulin, Esquire, and Samuel J. Wellborn, Esquire for the Company; Scott Elliott, Esquire for SCEUC; William C. Cleveland, IV, Esquire for SACE/CCL; and Alexander W. Knowles, Esquire, and Andrew M. Bateman, Esquire, for ORS.<sup>8</sup> At the outset of the hearing, the ORS counsel presented the Stipulation, which was admitted into the record as Hearing Exhibit 1. SACE/CCL did not sign the Stipulation but do not oppose it.

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<sup>8</sup> Richard L. Whitt, Esquire, representing SBA requested to be excused from the hearing, and the Commission granted his request.



DEC and ORS presented witnesses regarding the Company's base rates for fuel costs. SACE and CCL presented a witness on natural gas fuel costs and data tracking and reporting. No other parties filed testimony.

#### **A. DEC Testimony**

The Company presented the direct testimonies of Kenneth D. Church, Brett Phipps, Steven D. Capps, Steve Immel, Kimberly D. McGee, and Jason D. Martin, as well as the rebuttal testimonies of Brett Phipps and Kimberly D. McGee, via three (3) panels.<sup>9</sup> The pre-filed direct and rebuttal testimony of DEC witnesses McGee and Phipps, along with the supplemental revised testimony and revised exhibits of DEC witness McGee, were accepted into the record without objection and the Company witnesses' exhibits were marked as composite Hearing Exhibits 2 through 9 and were entered into the record of the case.<sup>10</sup>

Company witness Immel testified regarding DEC's fossil/hydro generation portfolio and changes made since the prior year's filing, changes expected in the near term, the performance of DEC's fossil/hydro generation facilities during the period of June 1, 2018 through May 31, 2019 ("review period"). Witness Immel also provided information on significant Fossil/Hydro/Solar

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<sup>9</sup> Prior to the hearing, and without objection from the Parties, the Commission granted DEC and ORS permission to utilize panels for the presentations of witnesses. DEC witnesses Phipps and Church were presented in the first panel; witnesses Immel and Capps were presented in the second panel; and witnesses McGee and Martin were presented in the third panel. ORS witnesses Brisen and Wilhite were also presented via one panel and witnesses Thompson and Seaman-Huynh presented via another.

<sup>10</sup> Hearing Exhibit 2 consists of the two non-confidential Direct Testimony Exhibits 1 and 2 of DEC witness Church; Hearing Exhibit 3 consists of the Direct Testimony Exhibits 1 and 2 of DEC witness Phipps; Hearing Exhibit 4 consists of Direct Testimony Exhibits 1 and 2 of DEC witness Capps; Hearing Exhibit 5 consists of the confidential Direct Testimony Exhibit 3 of DEC witness Capps and was filed under seal; Hearing Exhibit 6 consists of the Direct Testimony exhibit of DEC witness Martin; Hearing Exhibit 7 consists of the 13 Direct Testimony exhibits of DEC witness McGee; Hearing Exhibit 8 consists of the 13 Supplemental Testimony exhibits of witness McGee (of which 6 were revised); and Hearing Exhibit 9 consists of the 13 Rebuttal Testimony exhibits (of which 2 were revised) of witness McGee.

outages that occurred during the review period and provided information concerning environmental compliance efforts.

Company witness Capps discussed the performance of DEC's nuclear fleet during the review period.<sup>11</sup> Witness Capps reported to the Commission that DEC achieved a net nuclear capacity factor, excluding reasonable outage time, of 101.45% for the review period, which is above the 92.5% set forth in S.C. Code Ann. § 58-27-865.

Company witness Phipps testified regarding DEC's fossil fuel purchasing practices and costs for the review period and described related changes forthcoming for the period October 1, 2019 through September 30, 2020 ("billing period"). Company witness Phipps also responded to the opinion testimony and recommendations offered by Gregory Lander on behalf of SACE and CCL.

Company witness Church testified regarding the Company's nuclear fuel purchasing practices, provided costs for the review period, and described changes expected in the billing period.

Company witness Martin testified regarding DERP costs that are incorporated into the proposed fuel factors by witness McGee. Witness Martin also provided information on the nature of the costs filed as well as any changes made to the DERP portfolio since the previous fuel proceeding. Additionally, Company witness Martin provided testimony to update the proposed fuel rates to reflect impacts resulting from the Commission's directive issued on May 8, 2019 in the DEC South Carolina base rate case, Docket No. 2018-319-E. The Commission approved utilization of \$40.1 million of the unamortized SC DERP rebate balance to offset the excess

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<sup>11</sup> Pursuant to the Company's request, Commission Order No. 2019-340 ordered that Exhibit 3 of DEC witness Capps' testimony be treated as confidential.

deferred income tax balance to be returned to customers due to the reduction in federal income tax rates, and this amount was used to decrease the incremental cost associated with the Solar Rebate Program going forward. Finally, witness Martin sponsored the Company's revisions to the 2019 Renewable Net Metering Rider RNM tariff sheet, filed as Martin Exhibit 1.

Company witness McGee's direct testimony addressed DEC's actual fuel, capacity-related costs (including Public Utility Regulatory Policies Act of 1978 ("PURPA") capacity, environmental, and DERP cost data for the review period, the projected fuel, capacity-related costs, environmental, and DERP cost data for June 1, 2019 through September 30, 2019 (the "forecast period"), and DEC's proposed fuel factors by customer class for the billing period. Company witness McGee provided thirteen (13) exhibits to support her direct testimony.

Company witness McGee discussed the Company's approved DERP, associated costs and the DERP NEM Incentive. Witness McGee testified that the Company seeks approval for DERP Incremental costs amounting to a per-account monthly charge of \$0.62, \$1.96 and \$94.88 for South Carolina residential, commercial, and industrial customers, respectively, including Gross Receipts Tax and regulatory fees. Company witness McGee provided supplemental testimony to re-classify certain system costs related to the firm natural gas transportation and storage costs as a capacity-related cost and included an adjustment to the estimated period and forecast period to remove capital lease payments inadvertently included in the firm natural gas transportation and storage cost projections. Witness McGee's supplemental testimony included thirteen (13) exhibits.

At the hearing, witness McGee also testified to the Stipulation reached by the Stipulating Parties. Company witness McGee stated that the impact of the rates set forth in the Stipulation for an average residential customer using 1,000 kWh per month is an increase of \$1.54, or 1.26%.

Company witness McGee stated that the approximate increases anticipated in the average monthly bill for General Service customers of approximately 0.4% and 1.3% for Industrial customers.

### **B. SACE/CCL Testimony**

Following the presentation of the Company's witnesses, SACE/CCL presented the pre-filed direct and surrebutal testimony of Gregory Lander. SACE/CCL witness Lander's pre-filed testimony was accepted into the record without objection and the two (2) attachments to Mr. Lander's direct testimony were moved into the record as composite Hearing Exhibit 10. SACE/CCL witness Lander testified regarding natural gas pipeline capacity contracting, costs, and the Company's data reporting practices relating to capacity releases and third-party gas sales.

### **C. ORS Testimony**

Following the presentation of the Company's witnesses and SACE/CCL's witness, ORS presented the direct testimonies of Anthony D. Briseno, Sarah E. Wilhite, Ryder C. Thompson, and Michael L. Seaman-Huynh, via two (2) panels. The pre-filed direct testimony of all ORS witnesses was accepted into the record without objection by the Parties and the ORS witnesses' exhibits were marked as composite Hearing Exhibits 11 through 14 and were entered into the record of the case.

ORS witness Briseno presented direct testimony and ten (10) exhibits, which demonstrated the results of ORS's examination of DEC's books and records pertaining to operations under the Fuel Adjustment Clause for the review period.<sup>12</sup> The estimated months of the June 2019 through September 2019 ("Estimated Period"), were also reflected in witness Briseno's pre-filed testimony. In his pre-filed direct testimony, witness Briseno stated that based on ORS's

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<sup>12</sup> Composite Hearing Exhibit 11 consists of the Direct Testimony Exhibits of Anthony D. Briseno (Audit Exhibits ADB-1 through ADB-10).

examination, ORS agrees with the following cumulative (over)/under-recovery balances as calculated by the Company:

- May 2019 base fuel cost under-recovery balance of \$86,217,228;
- May 2019 environmental cost component over-recovery of \$965,535;
- May 2019 capacity cost component over-recovery balance of \$5,379,538;
- May 2019 DERP incremental over-recovery balance of \$474,257;
- May 2019 DERP avoided cost over-recovery balance of \$1,470;
- September 2019 estimated environmental cost component under-recovery balance of \$346,747;
- September 2019 estimated capacity cost component over-recovery balance of \$7,457,040;
- September 2019 estimated DERP incremental cost over-recovery balance of \$1,462,326;
- September 2019 estimated DERP avoided cost over-recovery balance of \$18,581.

Based on ORS's examination, ORS calculated the following adjusted cumulative under-recovery balance for DEC:

- September 2019 estimated base fuel cost under-recovery balance of \$79,341,242.

ORS witness Wilhite presented direct testimony and one (1) exhibit.<sup>13</sup> Witness Wilhite testified regarding the ORS's recommendations resulting from the examination of DEC's DERP expenses for the Estimated Period, and October 2019 through September 2020 ("Forecasted Period"). Specifically, witness Wilhite testified regarding the Company's DERP avoided and incremental costs, the method by which the Company proposed to recover those costs, and the

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<sup>13</sup> Hearing Exhibit 12 consists of the Direct Testimony Exhibit of Sarah E. Wilhite (Exhibit 1).

value of the NEM incentive. Additionally, witness Wilhite addressed the Company's modification to the Renewable Net Metering Rider.

ORS witness Seaman-Huynh presented direct testimony and six (6) exhibits.<sup>14</sup> Witness Seaman-Huynh testified regarding the Company's fuel expenses and to ORS's examination of the Company's fossil and nuclear fuel procurement, fuel transportation, environmental compliance-related costs and purchases, forecasting, resource planning, purchased power and the Company's policies and procedures.

ORS witness Thompson presented direct testimony, six (6) exhibits, and one (1) revised exhibit.<sup>15</sup> Witness Thompson testified regarding ORS's examination of DEC's power plant operations and to nuclear, fossil and hydro generation performance, generation mix, plant dispatch, and forecasted power plant operations.

In summary, through the testimony and exhibits presented to the Commission in this proceeding, the Stipulating Parties represent that resolving all issues of the Stipulating Parties in this case in accordance with the terms and conditions contained in the Stipulation is just, fair, reasonable and in the public interest.

#### **IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW**

Having heard the testimony of the witnesses and representations of counsel and after careful review of the Stipulation, the Commission finds that approval of the terms set out in the Stipulation is consistent with the standards for fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865, and is supported by the substantial evidence in the record. The

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<sup>14</sup> Composite Hearing Exhibit 14 consists of the Direct Testimony Exhibits of Michael L. Seaman-Huynh (Exhibits MSH-1 through MSH-6).

<sup>15</sup> Composite Hearing Exhibit 13 consists of the Direct Testimony Exhibits of Ryder C. Thompson (Exhibits RCT-1 through RCT-6) and Revised Exhibit RCT-1.

Stipulation's terms allow recovery in a precise and prompt manner while assuring public confidence and minimizing abrupt changes in charges to customers. As such, approval of the Stipulation is in the public interest in this case. The Commission further finds that the Stipulation's terms provide stabilization to the fuel factors, minimize fluctuations for the near future, and do not appear to inhibit economic development in South Carolina. Additionally, the Commission finds and concludes that the Stipulation affords the Parties the opportunity to review costs and operational data in succeeding fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865.

The Commission finds that the methodology for determining the environmental cost component of the fuel factors and the methodology for allocation and recovery of the avoided capacity component used by DEC in this proceeding are consistent with the statutory requirements of S.C. Code Ann. § 58-27-865 and are just and reasonable.

The Commission finds that the 2019 component values for the NEM Distributed Energy Resource, as shown in Table 5 in the testimony of DEC witness Martin, comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10 *et seq.*

The Commission finds that the revisions to the 2019 Renewable Net Metering Rider RNM tariff sheet reflected in Martin Exhibit 1 are lawful, just and reasonable.

The Commission finds that the DERP Charges as indicated in the Stipulation, are reasonable and comply with S.C. Code Ann. §§ 58-27-865, 58-39-140 and 58-39-150.

The Commission finds that the estimated base fuel cost under-recovery balance of \$79,341,242 as of September 2019 is lawful, just, and reasonable and supported by the reliable, probative, and substantial evidence of record.

**IT IS THEREFORE ORDERED THAT:**

1. The Stipulation, attached hereto as Order Exhibit 1, and the pre-filed testimonies of ORS witnesses Anthony D. Briseno, Sarah E. Wilhite, Michael L. Seaman-Huynh, and Ryder C. Thompson, the pre-filed testimonies of SACE/CCL witness Gregory Lander, and the pre-filed testimonies DEC witnesses Kenneth D. Church, Brett Phipps, Steven D. Capps, Steve Immel, Kimberly D. McGee, and Jason D. Martin, along with their respective exhibits entered into evidence as Hearing Exhibits 2–14, are accepted into the record in the above-captioned case without objection. Lastly, the oral testimony of the above witnesses presented at the hearing on September 10, 2019, is also incorporated into the record of this case.

2. The fuel purchasing practices, plant operations, and fuel inventory management of DEC related to the historical fuel costs and revenues for the period ending May 31, 2019, are prudent. However, with regard to plant outages not complete as of May 31, 2019, and plant outages where final reports or investigations (Company, contractor, government reports or otherwise) were not available at the time of the hearing on this matter, the reasonableness of such outages shall be subject to review in the period where such report(s) become available.

3. The Stipulation is incorporated into this present Order by reference and attachment and is found to be a reasonable resolution of the issues in this case and to be in the public interest, and is hereby adopted and approved.

4. The methodologies used by the Company to calculate its avoided energy and capacity costs under PURPA for the review and billing period are reasonable and prudent.

5. The Company's revisions to the 2019 Renewable Net Metering Rider RNM tariff sheet, attached hereto as Order Exhibit 2, are lawful, just and reasonable, and shall become effective for service rendered from October 1, 2019 through September 30, 2020.



6. The Company's calculation and method of accounting for avoided and incremental costs for NEM during the Review Period were reasonable and prudent, and were consistent with the methodology approved in Commission Order No. 2015-194, and complied with S.C. Code Ann. § 58-40-10 *et seq.*

7. The 2019 component values for NEM Distributed Energy Resource comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10 *et seq.*

8. DEC shall set its Residential, General Service/Lighting, and Industrial base fuel factors at 2.1166 cents per kWh (not including applicable environmental, capacity-related, and DERP avoided cost components) effective for service rendered from October 1, 2019 through September 30, 2020.<sup>16</sup>

9. DEC shall set its environmental component billing factor at 0.0603 cents per kWh for the Residential class, 0.0249 cents per kWh for the General Service/Lighting class, and .0158 cents per kWh for the Industrial class for service rendered from October 1, 2019 through September 30, 2020.

10. DEC shall set its capacity-related component at 0.1101 cents per kWh for the Residential class, 0.0279 cents per kWh for the General Service/Lighting class, and .0131 cents per kWh for the Industrial class for service rendered from October 1, 2019 through September 30, 2020.

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<sup>16</sup> The base fuel factors, environmental component billing factor, avoided capacity component, and DERP Charge do not include Gross Receipt Tax and regulatory fees.

11. DEC shall set its DERP avoided cost component at 0.0026 cents per kWh for the Residential class, 0.0012 cents per kWh for the General Service/Lighting class, and .0007 cents per kWh for service rendered from October 1, 2019 through September 30, 2020.

12. DEC shall set its DERP Charge at \$0.62/month for the Residential class, \$1.96/month for the Commercial class, and \$94.88/month for the Industrial class, including Gross Receipts Tax and regulatory fees.

13. The Parties shall abide by the terms of the Stipulation.

14. DEC shall file the South Carolina Retail Adjustment for Fuel, Variable Environmental, and Avoided Capacity Costs Rider and all other retail Tariffs with the Commission and a copy with ORS within ten (10) days of receipt of this Order.

15. DEC shall comply with the notice requirements set forth in S.C. Code Ann. § 58-27-865.

16. DEC shall continue to file the monthly reports as previously required.

17. DEC shall continue to examine and make adjustments as necessary to its natural gas hedging program in light of the potentially reduced volatility in the domestic natural gas market. DEC shall also provide monthly natural gas hedging reports to ORS.

18. DEC shall, by rate class, account monthly to the Commission and ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to unbilled revenues with a corresponding deferred debit or credit.

19. DEC shall submit monthly reports to the Commission and ORS of fuel costs and scheduled and unscheduled outages of generating units with a capacity of 100 megawatts or greater.

20. This Order shall remain in full force and effect until further Order of the Commission.

**BY ORDER OF THE COMMISSION:**

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Comer H. Randall, Chairman

ATTEST:

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Justin T. Williams, Vice-Chairman

(SEAL)

## September 3, 2019

## STIPULATION

ELECTRONICALLY FILED - 2019 September 20 11:58 AM - SCPSC - Docket # 2019-3-E - Page 20 of 38

**A. STIPULATION OF TESTIMONY AND WAIVER OF CROSS-EXAMINATION**

A.1 The Stipulating Parties agree to stipulate into the record before the Commission the pre-filed direct testimony and exhibits of ORS witnesses Anthony D. Briseno, Sarah E. Wilhite, Ryder C. Thompson, and Michael L. Seaman-Huynh, without objection or cross-examination. The Stipulating Parties also agree to stipulate into the record before the Commission, without objection or cross-examination, the direct testimony and exhibits of DEC witnesses Kimberly D. McGee, Steve Immel, Steven Capps (including Confidential Exhibit No. 3), Jason D. Martin, Brett Phipps, and Kenneth Church. The Stipulating Parties further agree to stipulate into the record the pre-filed supplemental direct testimony and exhibits of Kimberly D. McGee without objection, change, amendment or cross-examination with the exception of changes comparable to that which would be presented via an errata sheet or through a witness noting a correction. The Stipulating Parties also agree to stipulate into the record before the Commission, without objection or cross-examination, the rebuttal testimony and exhibits of DEC witnesses Kimberly D. McGee and Brett Phipps.

A.2 The Stipulating Parties reserve the right to engage in re-direct of witnesses as may be necessary to respond to issues raised by the examination of their witnesses by non-signatories to this Stipulation.

A.3 The Stipulating Parties agree that no other evidence will be offered in the proceeding by the Stipulating Parties other than the stipulated testimony and exhibits and this Stipulation with the exception of changes comparable to that which would be presented via an errata sheet or through a witness noting a correction or clarification or by a witness adopting the testimony of another if permitted by the Commission or to answer a question posed by a non-signatory to this Stipulation.

## B. STIPULATION TERMS

B.1 The Stipulating Parties agree to the proposal set out immediately below, and this proposal is hereby adopted, accepted, and acknowledged as the stipulation of the Stipulating Parties.

B.2 Without prejudice to the position of any Stipulating Party in future proceedings, the Stipulating Parties agree to accept all recommendations and adjustments in the testimony and exhibits of ORS witnesses.

### Avoided and Incremental Costs, Net Energy Metering and Distributed Energy Resources

B.3 The Stipulating Parties agree for purposes of this stipulation and without prejudice to the position of any Stipulating Party in any future proceeding that the 2019 component values for the Net Energy Metering ("NEM") Distributed Energy Resources, as shown in Table 5 in the testimony of DEC witness Martin and listed below comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10, *et seq.*

Components of NEM Distributed Energy Resource Value	Component value (\$/kWh)  Residential PV <sup>1</sup>	Component value (\$/kWh)  SGS PV <sup>1</sup>	Component value (\$/kWh)  Large PV <sup>1</sup>
Avoided Energy Cost	\$0.036692	\$0.036689	\$0.036675

<sup>1</sup> "Residential PV" refers to a load shape reflecting generation installed by a residential customer. "SGS PV" refers to a load shape reflecting generation installed by a small commercial/industrial customer served under Small General Service Schedule SGS. "Large PV" refers to a load shape reflecting generation installed by a customer with higher consumption requirements and applies to all other nonresidential schedules. For the first time, the Company has separated the values for residential customers ("Residential PV") and small commercial/industrial customers ("SGS PV") as a result of available actual metered solar load profile data for the residential class. The Company continues to utilize third-party solar load profile data for non-residential customers.

Avoided Capacity Cost	\$0.014078	\$0.014071	\$0.013978
Ancillary Services	\$0.000000	\$0.000000	\$0.000000
T&D Capacity	\$0.000000	\$0.000000	\$0.000000
Avoided Criteria Pollutants <sup>2</sup>	\$0.000034	\$0.000034	\$0.000033
Avoided CO2 Emissions Cost	\$0.000000	\$0.000000	\$0.000000
Fuel Hedge <sup>3</sup>	\$0.000000	\$0.000000	\$0.000000
Utility Integration & Interconnection Cost	\$0.000000	\$0.000000	\$0.000000
Utility Administrative Cost	\$0.000000	\$0.000000	\$0.000000
Environmental Costs	\$0.000000	\$0.000000	\$0.000000
<b>Subtotal</b>	<b>\$0.050804</b>	<b>\$0.050794</b>	<b>\$0.050686</b>
Line Losses <sup>4</sup>	\$0.002315	\$0.002315	\$0.002309
<b>Total Value of NEM Distributed Energy</b>	<b>\$0.05312</b>	<b>\$0.05311</b>	<b>\$0.05299</b>

B.4 Distributed Energy Resource Program (“DERP”) incremental costs are required by Act 236 to be allocated and recovered based on the same method used by the utility to allocate and recover variable environmental costs and under a separate DERP component of the overall fuel factor. Therefore, ORS analyzed the actual and estimated DERP incremental costs that DEC incurred for the period of June 2018 through May 2019, the estimated costs for the period June 2019 through September 2019, and the forecasted costs for the period October 2019 through September 2020. The Stipulating Parties agree with the adjustments made by the Company to the DERP component. The Stipulating Parties agree with the ending cumulative balances of DERP incremental costs for May 2019 as an over-recovered \$474,257, and September 2019 as an over-recovered \$1,462,326, as calculated by the Company. The Stipulating Parties agree that the appropriate fixed charges per account, including gross receipts tax and regulatory fees, to recover DERP incremental costs (the “DERP Charge”) for the period beginning with service rendered from October 2019 through September 2020 are listed below.

<sup>2</sup> Avoided Criteria Pollutants reflects NOx and SOx that have been separately identified from approved marginal energy costs.

<sup>3</sup> Pursuant to the Settlement Agreement reached in DEC’s 2016 annual fuel proceeding (Docket No. 2016-3-E), the Company has calculated the hedge value and determined that no fuel hedge exists; therefore, the value is zero.

<sup>4</sup> Line loss factors are 3.99645% for on-peak marginal energy, 3.98952% for off-peak marginal energy and 6.0427% for marginal capacity per DEC’s updated 2018 line loss analysis based upon 2018 cost of service.

## EXHIBIT 1

DERP Charge <sup>5</sup> (\$/account)		
	Annual Charge	Monthly Charge
Residential	7.45	0.62
Commercial	23.55	1.96
Industrial	1,138.54	94.88

B.5 The Stipulating Parties agree that the DERP Charges as set forth above are consistent with S.C. Code Ann. §§ 58-27-865, 58-39-140 and 58-39-150 and with Commission orders.

B.6 The Stipulating Parties agree that current under-collected DERP incremental costs will be treated in the same manner as other fuel and fuel-related under-collected balances are treated and any under-collection resulting from the annual cost caps mandated by Act 236 will be reallocated using each class's contribution to peak demand. The Stipulating Parties agree that in an effort to keep the Stipulating Parties and DEC's customers informed of the (over)/under-recovery balances related to DERP incremental costs, DEC will provide to ORS and, where requested, its customers, forecasts of the expected DERP Charge to be set at its next annual fuel proceeding based upon DEC's historical (over)/under-recovery to date and DEC's forecast of DERP incremental and avoided costs. Forecasts will be provided in the same manner as forecasts of the expected fuel factor.

B.7 DERP avoided costs are required by Act 236 to be allocated and recovered based on the same method used by the utility to allocate and recover variable environmental costs and under a separate DERP component of the overall fuel factor. Therefore, ORS analyzed the DERP avoided costs that DEC reported and projected for the period of June 2018 through May 2019, the estimated costs for the period of June 2019 through September 2019, and the forecasted costs for

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<sup>5</sup> Gross Receipts Tax and regulatory fees are included.



the period October 2019 through September 2020 and found them to be reasonable. The Stipulating Parties agree with the adjustments made by the Company to the DERP avoided costs component. The Stipulating Parties agree with the ending cumulative balances of DERP avoided costs for May 2019 as an over-recovered \$1,470, and September 2019 as an over-recovered \$18,581, as calculated by the Company.

**Fuel Expenses and Power Plant Operations**

B.8 The Stipulating Parties agree with the adjustments made by the Company to the base fuel component. The Stipulating Parties agree with the ending cumulative balances of base fuel for May 2019 as an under-recovered \$86,217,228, and September 2019 as an under-recovered \$79,341,242 as calculated by the ORS.

B.9 The Stipulating Parties agree with the ending cumulative balances of environmental cost for May 2019 as an over-recovered \$965,535, and September 2019 as an under-recovered \$346,747, as calculated by the Company.

B.10 ORS also analyzed DEC's calculation of the projected cumulative capacity-related cost. The Stipulating Parties agree with the ending cumulative balances of capacity costs for May 2019 as an over-recovered \$5,379,538, and September 2019 as an over-recovered \$7,457,040, as calculated by the Company.

B.11 ORS thoroughly reviewed and investigated DEC's nuclear operations during the review period. As shown in ORS witness Thompson's Exhibit RCT-1, DEC's nuclear fleet achieved an average net capacity factor during the actual period of 96.37%. DEC achieved this capacity factor notwithstanding the fact that it experienced four (4) scheduled refueling outages and three (3) forced outages during the actual period. S.C. Code Ann. § 58-27-865 states that:

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation facility or system, as applicable,

if the utility achieved a net capacity factor of ninety-two and one-half percent or higher during the period under review. The calculation of the net capacity factor shall exclude reasonable outage time associated with reasonable refueling, reasonable maintenance, reasonable repair, and reasonable equipment replacement outages; the reasonable reduced power generation experienced by nuclear units as they approach a refueling outage; the reasonable reduced power generation experienced by nuclear units associated with bringing a unit back to full power after an outage; Nuclear Regulatory Commission required testing outages unless due to the unreasonable acts of the utility; outages found by the commission not to be within the reasonable control of the utility; and acts of God. The calculation also shall exclude reasonable reduced power operations resulting from the demand for electricity being less than the full power output of the utility's nuclear generation system.

Excluding all reasonable outage time pursuant to S.C. Code Ann. §58-27-865(F), DEC's net capacity factor for the review period was 101.45% as reflected in DEC witness Capps Exhibit 1.

B.12 The Stipulating Parties further agree that, except as noted herein, any challenges to DEC's historical fuel cost recovery for the period ending May 31, 2019, are not subject to further review; however, the projected fuel costs for periods beginning June 1, 2019, and thereafter shall be open issues in future fuel cost proceedings held under the procedure and criteria established in S.C. Code Ann. § 58-27-865.

#### **Fuel Factors**

B.13 The appropriate fuel factors for DEC to charge for the period beginning with service rendered in October 2019 and extending through service rendered in September 2020 are listed below. These fuel factors include the South Carolina base fuel costs, environmental costs, avoided capacity and the DERP avoided cost, but do not include gross receipt tax and regulatory fees. The Stipulating Parties agree that the fuel factors will be adjusted for billing purposes to include those amounts:

## EXHIBIT 1

Customer Class	Base Fuel Cost Component (¢/kWh)	Environmental Cost Component (¢/kWh)	Capacity Related Cost Component (¢/kWh)	DERP Avoided Cost Component (¢/kWh)	Total Fuel Factor (¢/kWh)
Residential	2.1166	0.0603	0.1101	0.0026	2.2896
General Service/ Lighting	2.1166	0.0249	0.0279	0.0012	2.1706
Industrial	2.1166	0.0158	0.0131	0.0007	2.1462

B.14 The Stipulating Parties agree that the fuel factors set forth above are consistent with S.C. Code Ann. § 58-27-865.

Other

B.15 The Stipulating Parties agree that, except as noted herein, any challenges to DEC's historical fuel costs recovery for the period ending May 31, 2019, are not subject to further review; however, with regard to plant outages not complete as of May 31, 2019, and plant outages where final reports or investigations (Company, contractor, government reports or otherwise) are not available, the Stipulating Parties agree that they retain the right to review the reasonableness of plant outage(s) and associated costs in the review period during which the outage is completed or when the report(s) become available.

B.16 DEC agrees that in an effort to keep the Stipulating Parties and DEC's customers informed of the (over)/under recovery balances related to fuel costs, DEC's DERP incremental costs, and of DEC's commercially reasonable efforts to forecast the expected fuel factor to be set at its next annual fuel proceeding, DEC will provide to the Stipulating Parties, , and where applicable, its other customers, the following information:

- a. copies of the monthly fuel recovery reports currently filed with the Commission and ORS showing the monthly (over)/under-recovery and cumulative balances through the end of the forecast period;<sup>6</sup>
- b. copies of the monthly fuel recovery reports currently filed with the Commission, modified to include reports of itemized monthly actual DERP incremental and avoided costs as well as the monthly over/under cumulative balances of DERP avoided and incremental costs;
- c. forecasts of the expected fuel factor to be set at its next annual fuel proceeding based upon DEC's historical (over)/under-recovery to date and DEC's forecast of prices for uranium, natural gas, coal, oil and other fuel required for generation of electricity. Such forecasts will be provided in the 4th quarter of the calendar year prior to the next annual fuel proceeding and in the 2nd quarter of the calendar year of the Company's next annual fuel proceeding. DEC will use commercially reasonable efforts in making these forecasts. To the extent that the forecast data required hereunder is confidential, any party or customer, other than ORS, that requests forecasted fuel data will have to sign a non-disclosure agreement agreeing to protect the data from public disclosure and to only disclose it to employees or agents with a need to be aware of this information; and,
- d. forecasts of the expected DERP Charge to be set at its next annual fuel proceeding based upon DEC's historical (over)/under-recovery to date and

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<sup>6</sup> The Company agrees to break-out Schedule 4 of the monthly fuel recovery reports so that each component (base fuel, environmental, avoided capacity, and DER avoided costs) is reported separately.

DEC's forecast of DERP incremental and avoided costs. Forecasts will be provided in the same manner as B.16(c) above.

B.17 The Stipulating Parties agree that DEC's methodology for determining the environmental cost component of the fuel factor and the methodology for allocation and recovery of the capacity-related cost component of the fuel factor (which includes purchased power capacity costs under the Public Utility Regulatory Policies Act of 1978 and natural gas transportation and storage costs) are consistent with the statutory requirements of S.C. Code Ann. § 58-27-865.

B.18 DEC agrees to continue to examine and make adjustments, as necessary, to its natural gas hedging program in light of the potentially reduced volatility in the domestic natural gas market. DEC also agrees to provide monthly natural gas hedging reports to the ORS.

### **C. REMAINING STIPULATION TERMS AND CONDITIONS**

C.1 Further, ORS is charged by law with the duty to represent the public interest of South Carolina pursuant to S.C. Code Ann. § 58-4-10(B) (Supp. 2018). S.C. Code Ann. § 58-4-10(B) reads in part as follows:

'public interest' means the concerns of the using and consuming public with respect to public utility services, regardless of the class of customer and preservation of continued investment in and maintenance of utility facilities so as to provide reliable and high quality utility services.

ORS believes these stipulated terms serve the public interest as defined above.

C.2 The Stipulating Parties agree that this Stipulation is reasonable, is in the public interest, and is in accordance with law and regulatory policy. This Stipulation in no way constitutes a waiver or acceptance of the position of any Stipulating Party concerning the requirements of S.C. Code Ann. § 58-27-865 (2015), S.C. Code Ann. § 58-40-10, *et seq* (2015), and Commission Order 2015-194 in any future proceeding.

C.3 The Stipulating Parties agree to cooperate in good faith with one another in recommending to the Commission that this Stipulation be accepted and approved by the Commission as a fair, reasonable and full resolution in the above-captioned proceeding. The Stipulating Parties, including their agents, further agree that communications regarding the Stipulation, either between the Stipulating Parties or with non-signatories hereto, shall be supportive of the terms agreed to in this Stipulation.

C.4 This written Stipulation contains the complete agreement of the Stipulating Parties regarding this matter. There are no other terms or conditions to which the Stipulating Parties have stipulated. This Stipulation integrates all discussions among the Stipulating Parties into the terms of this written document. The Stipulating Parties agree that this Stipulation will not constrain, inhibit or impair their arguments or positions held in future proceedings, nor will this Stipulation or any of the matters agreed to in it be used as evidence or precedent in any future proceeding. If the Commission should decline to approve this Stipulation in its entirety, then any Stipulating Party desiring to do so may withdraw from this Stipulation without penalty.

C.5 This Stipulation shall be interpreted according to South Carolina law.

C.6 Except as expressly set forth herein, this Stipulation in no way constitutes a waiver or acceptance of the position of any Stipulating Party concerning the requirements of S.C. Code Ann. § 58-27-865, S.C. Code Ann. § 58-40-10, *et seq* (2015), and Commission Order No. 2015-194 in any future proceeding. This Stipulation does not establish any precedent with respect to the issues resolved herein, and in no way precludes any Stipulating Party herein from advocating an alternative methodology under S.C. Code Ann. § 58-27-865, S.C. Code Ann. § 58-40-10, *et seq* (2015), and Commission Order No. 2015-194 in any future proceeding.

C.7 This Stipulation shall bind and inure to the benefit of each of the signatories hereto and their representatives, predecessors, successors, assigns, agents, shareholders, officers, directors (in their individual and representative capacities), subsidiaries, affiliates, parent corporations, if any, joint ventures, heirs, executors, administrators, trustees, and attorneys.

C.8 The Stipulating Parties represent that the terms of this Stipulation are based upon full and accurate information known as of the date this Stipulation is executed. If, after execution, but prior to a Commission decision on the merits of this proceeding, a Stipulating Party is made aware of information that conflicts, nullifies, or is otherwise materially different than that information upon which this Stipulation is based, that Stipulating Party may withdraw from the Stipulation with written notice to every other Stipulating Party.

C.9 The above terms and conditions fully represent the agreement of the Stipulating Parties. Therefore, each Stipulating Party acknowledges its consent and agreement to this Stipulation by authorizing its counsel to affix his or her signature to this document where indicated below. Counsel's signature represents his or her representation that his or her client has authorized the execution of the agreement. Facsimile signatures and e-mail signatures shall be as effective as original signatures to bind any Stipulating Party. This document may be signed in counterparts, with the various signature pages combined with the body of the document constituting an original and provable copy of this Stipulation.

**[PARTY SIGNATURES TO FOLLOW ON SEPARATE PAGES]**

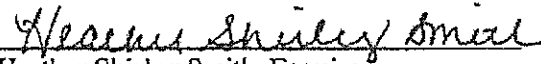
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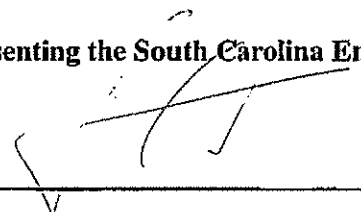
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**Representing the South Carolina Energy Users Committee**



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EXHIBIT 1

RIDER RNM (SC)  
RENEWABLE NET METERINGAVAILABILITY

Available to residential and nonresidential Customers receiving concurrent service from the Company, on a metered rate schedule, except as indicated under General Provisions. A customer-generator is an owner, operator, or lessee of an electric generation unit that generates or discharges electricity from a renewable energy resource, including an energy storage device configured to receive electrical charge solely from an onsite renewable energy resource. The renewable net energy metered (NEM) generation, which includes a solar photovoltaic; solar thermal; wind powered; hydroelectric; geothermal; tidal or wave energy; recycling resource; hydrogen fueled or combined heat and power derived from renewable resources; or biomass fueled generation source of energy, is installed on the Customer's side of the delivery point, for the Customer's own use, interconnected with and operated in parallel with the Company's system. The generation must be located at a single premise owned, operated, leased or otherwise controlled by the Customer. The system may either be owned by the Customer or by a lessor and leased to the Customer.

Service under this Rider is closed to new participants on and after June 1, 2021. Participants served under this Rider prior to May 16, 2019, and subsequent owners of the customer-generator facility, shall remain eligible for service under this Rider until December 31, 2025, when an alternate tariff must be selected. Participants and subsequent owners of the customer-generator facility applying for service under this Rider on and after May 16, 2019 and prior to June 1, 2021 shall remain eligible for service under this Rider until May 31, 2029, when an alternate tariff must be selected. Customers requesting NEM service on and after June 1, 2021 will receive service in accordance with the NEM tariff in effect at that time.

GENERAL PROVISIONS

1. To qualify for service under this Rider, the Customer must comply with all applicable interconnection standards and must provide, in writing, the Nameplate Capacity of the Customer's installed renewable generation system. Any subsequent change to the Nameplate Capacity must be provided by the Customer to the Company in writing by no later than 60 days following the change.
2. To qualify for service under this Rider, a residential Customer may be served on an approved residential rate schedule, but may not be served under Rider NM. The Nameplate Capacity of Customer's installed generation system and equipment must not exceed 20 kW AC.
3. To qualify for service under this Rider, a nonresidential Customer may be served on an approved general service or industrial rate schedule, but may not be served on Schedules TS, BC, HP, PG, MP or Rider NM. The Nameplate Capacity of Customer's installed renewable generation system and equipment must not exceed the lesser of 1,000 kW AC or 100% of the Customer's contract demand which shall approximate the Customer's maximum expected demand.
4. If the Customer is not the owner of the premises receiving electric service from the Company, the Company shall have the right to require that the owner of the premises give satisfactory written approval of the Customer's request for service under this Rider.
5. All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags", associated with the generation system shall be conveyed to the Company until billing of a Distributed Energy Resource Program Rider DERP Charge is discontinued on all customer bills. The Customer certifies that the environmental attributes have not, and will not, be remarketed or otherwise resold for any purpose, including another distributed energy resource standard or voluntary purchase of renewable energy certificates in South Carolina or in any other state or country for the Contract Period and any successive contract periods thereto.
6. If the electricity supplied to the Customer by the Company exceeds the electricity delivered to the grid by the customer-generator during a monthly billing period, the customer-generator shall be billed for the net electricity in kilowatt hours (kWh) supplied by the Company plus any demand or other charges under the applicable rate schedule or riders. If the electricity delivered to the grid by the customer-generator exceeds the electricity in kWh supplied by the utility during a monthly billing period, the Customer-Generator shall be credited for the excess kWh generated during that billing period.

RIDER RNM (SC)  
RENEWABLE NET METERING

7. Electricity delivered to the grid by the Customer's renewable generation that exceeds the electricity delivered by the Company is defined as Excess Energy. When used in conjunction with a time of use schedule, the TOU periods shall be specified in the applicable schedule and any Excess Energy shall apply first with the Excess Energy generated On-Peak kWh offsetting On-peak usage and then offsetting Off-peak usage. Any excess Off-Peak kWh shall only apply against Off-peak kWh usage. Any Excess Energy not used in the current month to offset usage shall carry forward to the next billing month.
8. Excess Energy shall be used to reduce electricity delivered and billed by the Company during the current or a future month, except that for the March billing period any carry-over shall be compensated as described in the RATE paragraph below.
9. In the event the Company determines that it is necessary to increase the capacity of facilities beyond those required to serve the Customer's electrical requirement or to install a dedicated transformer or other equipment to protect the safety and adequacy of electric service provided to other customers, the Customer shall pay the estimated cost of the required transformer or other equipment above the estimated cost which Company would otherwise have normally incurred to serve the Customer's electrical requirement, in advance of receiving service under this Rider.
10. The rates set forth herein are subject to Commission Order No. 2015-194, issued in Docket No. 2014-246-E pursuant to the terms of S.C. Code § 58-40-20(F)(4). Eligibility for this rate will terminate as set forth in that Order, and otherwise as specified above. The value of NEM generation eligible for this Rider shall be computed using the methodology contained in Commission Order No. 2015-194, in Docket No. 2014-246-E, and shall be updated annually by the Company. The value of NEM generation for 2019 is \$0.05312 per kWh for Schedules RS, RE, ES, RB and RT; \$0.05311 for Schedule SGS; and \$0.05299 for all other schedules.

RATE

All provisions of the applicable schedule and other applicable riders will apply to service supplied under this Rider, except as modified herein. For any bill month during which the Energy Charges are a net credit, the respective Energy Charges for the month shall be zero. Credits shall not offset the Basic Facilities Charge or the Demand Charge (if applicable). In addition to all charges in the applicable rate schedule for the Customer's net electrical usage, the following credit may be applicable annually:

## Annual Credit for Excess Generation

If the Customer has Excess Energy after offsetting usage as of the date of the March billing, the Company shall pay the Customer for the amount of the accumulated Excess Energy times a rate of \$0.0432 per kWh, after which the amount of Excess Energy shall be set to zero.

MINIMUM BILL

The monthly minimum bill for customers receiving service under this Rider shall be no less than Basic Facilities Charge from the applicable rate schedule and riders plus, if applicable, any of the following Charges: the Demand Charge, the Economy Demand Charge, Excess Demand Charge and the Extra Facilities Charge.

METERING REQUIREMENTS

The Company will furnish, install, own and maintain a billing meter to measure the kWh delivered by the Company to the Customer, and to measure the net kWh purchased by the Customer or delivered to the Company. For renewable generation capacity of 20 kW AC or less, the billing meter will be a single, bi-directional meter which records independently the net flow of electricity in each direction through the meter, unless the Customer's overall electrical requirement merits a different meter. For larger renewable generation capacities, the Company may elect to require two meters with 30-minute interval capabilities to separately record the Customer's electrical consumption and the total generator output, which will be electronically netted for billing. The Customer grants the Company the right to install, operate, and monitor special equipment to measure the Customer's generating system output, or any part thereof, and to obtain any other data necessary to determine the operating characteristics and effects of the installation. All metering shall be at a location that is readily accessible by the Company.

Duke Energy Carolinas, LLC

## EXHIBIT 2

Electricity No. 4

South Carolina Ninth (Proposed) Revised Leaf No. 119  
Superseding South Carolina Eighth Revised Leaf No. 119RIDER RNM (SC)  
RENEWABLE NET METERINGSAFETY, INTERCONNECTION AND INSPECTION REQUIREMENTS

This Rider is only applicable for installed renewable generation systems and equipment that complies with and meets all safety, performance, interconnection, and reliability standards established by the Commission, the National Electric Code, the National Electrical Safety Code, the Institute of Electrical and electronic Engineers, Underwriter's Laboratories, the Federal Energy Regulatory Commission and any local governing authorities. The Customer must comply with all liability insurance requirements of the Interconnection Standard.

POWER FACTOR

The Customer's renewable generation must be operated to maintain a 100% power factor, unless otherwise specified by Company. When the average monthly power factor of the power supplied by the Customer to the Company is other than 100%, the Company may correct the energy in kWh, as appropriate. The Company reserves the right to install facilities necessary for the measurement of power factor. The Company will not install such equipment, nor make a power factor correction if the renewable generation system is less than 20 kW and uses an inverter.

CONTRACT PERIOD

The Customer shall enter into a contract for service under this Rider for a minimum original term of one (1) year, and the contract shall automatically renew thereafter, except that either party may terminate the contract after one year by giving at least sixty (60) days prior notice of such termination in writing.

The Company reserves the right to terminate the Customer's contract under this Rider at any time upon written notice to the Customer in the event that the Customer violates any of the terms or conditions of this Rider, or operates the renewable generation system and equipment in a manner which is detrimental to the Company or any of its customers. In the event of early termination of a contract under this Rider, the Customer will be required to pay the Company for the costs due to such early termination, in accordance with the Company's South Carolina Service Regulations.